



HEALTH SYSTEM AND UNIVERSAL HEALTH COVERAGE: A NARRATIVE REVIEW OF FOUR COUNTRIES

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ABSTRACT

Background: Universal health coverage (UHC) is the stated political agenda for sustainable development. Coverage of services and financial risk protection are important performance indicators. The present review aimed to describe the health system, financing structure and level of achievement for UHC in 4 purposively chosen countries, including India, Germany, the United Kingdom and the United States of America.

Methods: This study used a narrative review methodology. Firstly, a targeted review of published evidence was undertaken by using selected keywords in PubMed and Google Scholar. Secondly, websites of key international organizations involved in supporting global and country-level work on UHC were searched for additional papers. Thirdly, a review of global databases and repositories of performance dashboards was undertaken to determine country-level UHC performance based on set indicators.

Results: Overall, the present review shows wide heterogeneity in the selected countries in terms of the extent of financing, patterns of financing, and density of the health workforce. The UHC performance index varies from 64% to 88%. More than 5% of people undergoing hospitalization in India are pushed below poverty due to health care expenditures.

Conclusion: The key lessons for adequate financing, enhancing the role of pre-payment and reducing out-of-pocket payments, developing a robust health workforce, as well as focusing on strategies to make the health systems efficient and equitable are important key recommendations.

KEYWORDS: Green Hospital, Green Initiatives, Water Management, Waste Management.

INTRODUCTION

Universal Health Coverage (UHC) is a shared aspiration of the countries globally. This is also reflected in the United Nations Sustainable Development Goals (SDGs), where the 3rd goal refers to the achievement of good health for all (UN, 2015; WHO, 2021). The central target to measure the success of the health goal is universal health coverage. Essentially, UHC is defined as the availability of all health services that are needed by people, of good quality, and at a cost that they can afford. It is measured based on 2 primary indicators – firstly, the coverage of services that are available to people, and secondly financial risk protection, which implies an absence of any financial hardship experienced by those who access care (WHO, 2021; WHO, 2000; World Bank, 2021).

Globally, the countries have taken different journeys towards the realization of the goal for UHC. This includes different forms adopted for health care delivery and different modes of financing health care services. While some countries have heavily relied on tax revenue to finance health services, other countries have used Social Health Insurance (SHI) or community health insurance, or let Private Out-of-Pocket (OOP) expenditures be the predominant health financing method (Anderson et al., 2022). Secondly, while some countries have organized a comprehensive network of public health care services, others have relied on purchasing care from the private sector, or a mix of both public and private sector providers. Thirdly, there is a difference in the extent to which the primary, secondary and tertiary health care services, or preventive and curative health care services, are prioritized. Finally, the model of health care delivery also varies in terms of being led predominantly by a doctor versus a nurse or community health worker-led care provision.

While there are several contextual, political and economic factors that play a role in determining the choice adopted by the respective countries in providing health care, each of these attributes has a different impact on the outcomes for UHC (McCartney, 2019; Venkateswaran, 2021). For example, the tax-financed healthcare systems aim to meet the twin objectives of patient access and cost-sustainability, it may limit the choice for patients in terms of healthcare providers (Anderson et al., 2022). On the other hand, letting people pay OOP for health care may offer a higher choice, but may lead to catastrophic consequences of high health care spending for the families. Similarly, from an equity point of view, while the contributions in tax-based and SHI are levied on income and wage respectively, and hence are based on the ability to pay, the OOP payments are regressive and impose disproportionately higher hardship on the poorer people. In fact, the poor may forgo care simply due to higher OOP costs and hence may impede access to health services.

There are several performance measurement systems to assess the UHC achievement at the national level, which have been established by global organizations such as the World Health Organization and the World Bank

(OECD, 2021; WHO, 2022; World Bank, 2021). These databases and repositories of information rank countries in terms of their achievement as per a standardized performance rating system. In addition, these databases also provide objective information on performance. Although these databases provide very rich information for the valuation of performance, however, these databases do not provide explicit reasons for the higher or lower performance of these countries, and how these countries could potentially further improve.

Several published studies undertake an assessment of national-level health system performance and provide some explanation of the factors behind the current state (Blümel, 2021; Bose, 2022; Chauhan et al., 2022; Rice et al., 2020; Selvaraj et al., 2022). However, not all of these are relevant from the point of view of UHC. Some of these have been published for specific disease areas, national health programs or specific services. Some cross-country comparisons of health system performance are available. However, it is related to specific outcomes such as amenable mortality or the efficiency of the health system. In view of this, there is a gap in current evidence to understand the evolution and current state of health systems for providing UHC, national performance for UHC, and a relationship of how the health system drivers and design factors are associated with the performance from a UHC viewpoint.

This paper aims to fill this important gap in existing evidence. Firstly, the paper explores the contextual situation and health system and health financing characteristics of 4 purposively chosen countries – the United Kingdom (UK), Germany, the United States of America (USA), and India. Secondly, the paper assesses the national performance in the 4 countries from a UHC lens. Finally, the paper provides an analysis of the relationship of health system, financing, and other contextual factors in these 4 countries with the UHC performance.

METHODOLOGY

This paper is a narrative review of the health system and financing for universal health coverage in 4 countries – the United Kingdom, Germany, the United States of America (USA), and India. These 4 countries were purposively selected due to inherent differences in the overall service delivery and financing structures. While the UK has historically developed government-run health services (Beveridge Model), the Germans have a social health insurance system. Similarly, while the USA has a higher share of voluntary private insurance, India has a relatively larger share of the uninsured population with high levels of out-of-pocket payments.

A targeted search strategy was undertaken on Google Scholar and PubMed. The main initial keywords included: "health system", "health financing", "Universal Health Coverage", "Health financing mechanisms", "UHC", "healthcare", "health system characteristics", and "health insurance". The search strategy was then refined by adding another domain including country-specific keywords

(e.g., "Germany", "India", "UK", "United Kingdom", "USA", and "United States of America") to focus the results on the four countries of interest. Besides the peer-reviewed journal articles, reports and policy papers were also included. Thirdly, a review of the websites of international development agencies working in health including the World Health Organization (WHO), the World Bank, and the Commonwealth Fund were also searched (WHO, 2022; World Bank, 2021; OECD, 2021). Official reports, publications, and datasets available on the websites of these organizations were reviewed. Finally, for monitoring the performance of UHC in these 4 countries, country reports, factsheets and global health data repositories of the WHO and the World Bank were also searched.

The data was finally analysed to present the country profile in terms of healthcare service delivery, health financing characteristics, and the UHC performance. Standard indicators describing the health system features and the UHC performance were used. For UHC monitoring, service coverage and financial risk protection were assessed. The incidence of impoverishment as a result of health care payments, at \$2.15 per capita, was reviewed as a measure of financial risk protection.

RESULTS

Characteristics	Germany	India	UK	USA
Total Population (thousands)	84,079	14,17,173	6,69,71	3,33,287
Population per km ²	238	481	280	285
Income level	HIC	LMIC	HIC	HIC
Literacy level (% of people aged 15 and above)	99%	74%	99%	99%
Formal education (%)				
GNI per capita, atlas method (US\$)	53,390	2,380	48,890	76,370
GDP per capita (US\$)	48,432.5	2,388.6	45,850.4	76,398.6
Medical doctors (per 10,000)	45.18	7.27	31.71	35.55
Nurses & midwifery personnel (per 10,000)	123.5	17.28	91.67	124.7
Hospital beds (per 10,000)	80	5.3	24.6	28.7

Table 1: Baseline Socio-Economic and Health System Profile of the Countries

Among the 4 countries studied, while India is a low-and-middle-income country (per capita income of \$2380), the rest are High-Income Countries (HIC) with a per capita income in excess of \$ 40,000 (Table 1). The density of nurses (123 per 10,000 population), medical doctors (45 per 10,000) and hospital beds (5.3 per 10,000) are lowest in India, while the density of health workforce in other 3 countries is 4-7 times higher, and hospital beds are 5-15 times higher in the 3 HIC countries. Overall, the healthcare infrastructure is stronger in Germany, the UK and the USA as compared to India.

Indicators	Germany (2020)	India (2020)	UK (2020)	USA (2020)
Current Health Expenditure (CHE) as % Gross Domestic Product (GDP)	13%	3%	12%	19%
Current Health Expenditure (CHE) per Capita in US\$	5,930	57	4,927	11,702
Domestic Private Health Expenditure (PVFD) as % of Current Health Expenditure (CHE)	22%	62%	16%	43%
Out-of-pocket (OOPS) as % of Current Health Expenditure (CHE)	13%	51%	14%	10%
Out-of-Pocket Expenditure (OOPS) per Capita in US\$	744	29	670	1,157
Compulsory Financing Arrangements (CFA) as % of Current Health Expenditure (CHE)	85%	37%	83%	85%
Government Financing Arrangements (GFA) as % of Current Health Expenditure (CHE)	9%	30	83	33%
Compulsory Health Insurance (CHI) as % of Current Health Expenditure (CHE)	76%	7%	0%	52%

Social Health Insurance (SHI) as % of Current Health Expenditure (CHE)	69%	7%	0%	22%
Voluntary Financing Arrangements (VFA) as % of Current Health Expenditure (CHE)	15%	62%	17%	15%
Voluntary Health Insurance (VHI) as % of Current Health Expenditure (CHE)	1%	7%	2%	1%

Table 2: Health Financing Characteristics

The extent and pattern of health expenditure vary very significantly between the countries (Table 2). Overall, India spends the least, both in terms of health expenditure as a percentage of the Gross Domestic Product (3%) and in terms of current health expenditure per capita (\$57). In contrast, the other 3 countries spend 12% (UK) to 19% (USA) of their GDP on health care. A key difference between the 3 HICs is that the USA spends more than double on healthcare than Germany and the UK. Another major difference in patterns of financing is the share of compulsory financing arrangements which is 37% in India, and in excess of 80% in each of the other countries. While the predominant source of revenue for financing healthcare in the UK is tax revenue, social insurance is the main route in Germany. Both India and the US have about 30% of their total healthcare financed through Government financing arrangements, however, India has a much higher share of out-of-pocket payments (48%).

Indicators	Germany	India	UK	USA
Primary care Physicians				
Ownership	Mostly Private	Mix of public and private providers	Mainly public	Mostly Private
Payment	Mainly Capitation, with some DRG.	Public: Salaried. Private: FFS.	Mainly Capitation	Mostly Capitation and Fee For Service; some pay for performance incentive payments.
Gatekeeping	Sickness funds are required to offer the option to enrol in the family physician model with gatekeeping.	In principle, for the public sector, but largely not functional. None for private.	Yes	Mostly no
Patient Registration required	Only in optional family physician models.	No	Yes	Mostly no
Hospitals				
Ownership	Mix of public and private nonprofit and for-profit.	Mostly private for-profit; some nonprofit and public facilities	Mainly public	Mostly nonprofit (56%); the remainder are public or for-profit.
Financing	Case-based DRG payments. Supplementary fees for highly specialized and expensive services and technologies (e.g., chemotherapy).	Public: Global budgets. Private: FFS.	Mix of capitation, and case-based payments; some local bundled-payment pilots.	Mix of FFS, case-based (DRG), and per diem payments, depending on the insurer. Some bundled payment and PFP programs in Medicare.

Table 3: Healthcare Delivery Characteristics

The physicians providing primary healthcare services in the German and US health systems are predominantly private, while it is delivered by the public system in the UK (Table 3). India has a plural health system with a mix of public and private providers delivering primary healthcare. The payments to primary care physicians are mostly in the form of capitation payments, while salary continues to be the predominant method of financing primary care in India. For hospital services, most of the HIC countries rely on case-based bundled payment in the form of diagnosis-related groups, with some services being paid fee for service. There is strong gatekeeping in the UK, weaker in Germany, and little or no gatekeeping in the US and India.

UHC Performance Indicators	Germany	India	United Kingdom (UK)	United States of America (USA)
UHC Index	88	63	88	86
UHC RMNCH Index	92	68	91	89
UHC Infectious Disease Coverage Index	92	69	98	90
UHC NCD Index	73	54	68	70
UHC Service Capacity & Access Index	95	64	98	97
Population with household spending on health greater than 10% of the total household budget (%)	1.53%	17.46%	2.36%	4.61%
Population pushed below the \$2.15 a day poverty line by household health expenditures (%)	0.02%	5.46%	0.00%	0.00%

Table 4: Country Performance for Universal Health Coverage (UHC)

Overall, there is a high degree of achievement of UHC in Germany, the UK and the USA with the overall index being in excess of 86% (Table 4). While the UHC service coverage in the 3 HIC countries is nearly 90% or more for reproductive, maternal and child health, and infectious diseases, it is relatively lower for NCDs (68% to 73%). On the contrary, service coverage in India varies from 54% (NCDs) to 69% (infectious diseases). In terms of financial risk protection, 18% of Indians spend more than 10% of their income on health care, which is 3.7 to 11.4 times higher in the USA and Germany respectively. Consequently, 5.5% of Indians are pushed below the poverty line (\$2.15 per capita) due to healthcare expenditures.

Health System Outcomes	Germany	India	UK	USA
Efficiency	++	+/-	++	+/-
Horizontal equity	++	+/-	+++	+
Vertical equity	++	+/-	+++	+

Table 5: Health System Outcomes at the Country Level

The outcomes of the health system in terms of achievement of universal health coverage are comparable or better in the UK and Germany as compared to the USA. This implies that the US health system is relatively inefficient in achieving desired service coverage and financial risk protection (Table 5). India, on the other hand, spends less than the desired level. In terms of equity, since health care in Germany and the UK is financed through contributions which are a share of the wage or income respectively, there is a higher vertical equity. Moreover, equity in access is also higher in both the UK and German health systems. In India, since access to care is determined by the ability to pay, it negatively affects equity in care utilization.

DISCUSSION

Universal access to health services is an essential human right. It is a prerequisite for individuals and societies to an inclusive development (Sen, 2008). In turn, good health also contributes to development through greater productivity (Ridhwan et al., 2022). Realizing the importance of universal health coverage, 'good health for all' is the overarching health goal of the Sustainable Development agenda. Access or coverage of health services, as well as financial risk protection, are the two important metrics to measure its achievement. The present narrative review of 4 diverse health systems provides some key lessons towards achieving UHC.

Firstly, it shows that adequate levels of health spending by the Government is an essential prerequisite for high levels of UHC. The 3 HICs including the UK, Germany and the USA have significantly higher health spending and consequently offer a high degree of coverage for basic services, besides higher financial risk protection, as compared to India. However, it is important to recognise that even within the HIC, coverage for services related to NCDs requires further strengthening.

Secondly, this review also highlights the importance of the high levels of pre-payment or pooling of risks, either through tax-based funding or health insurance, so as to prevent out-of-pocket expenditures. While the 3 HIC countries have a high degree of coverage for people with health insurance or government-mandated contributory schemes or covered through tax-funded health services, the proportion of health care spending in India through prepayment systems is relatively lower. However, India has recently initiated a large tax-funded health insurance scheme (PM-JAY) for 40% of its poorest population (Angell, 2019). A recent evaluation has shown that the risk of impoverishment among cancer patients is 60-70% less among those who are

enrolled in PM-JAY as compared to those not insured (Prinja, 2023). This shows the positive effects of pre-payment financing schemes on providing protection from financial hardship.

Thirdly, the review also shows that while spending adequately is important, it is equally important to make the health system efficient. While the UK and Germany have comparable or better achievements as compared to the USA, the latter spends more than double. This implies that the outcomes of health spending in the USA are relatively inefficient. This could be as a result of multiple reasons. One of the reasons is the significant use of voluntary private insurance, as well as predominant private health care provision. Another reason could be a lack of effective gatekeeping as well as weaker regulation on prices for drugs and health services.

Fourthly, the review also shows the importance of sufficient density of the health workforce, which is an important determinant of service coverage, as well as equitable distribution.

This review has certain limitations. It is not a systematic review of the evidence and hence we may have missed some important evidence. However, the purpose of the review was to basically describe the health system and appraise the UHC performance in the 4 countries. In that respect, the paper has been able to provide a succinct review. Secondly, the review could have benefitted from key informant interviews. However, the authors could not incorporate any qualitative feedback from key informants.

CONCLUSION

The review provides important background information and lessons for countries in order to plan their national strategic plans for UHC. The key lessons for adequate financing, enhancing the role of pre-payment and reducing out-of-pocket payments, developing a robust health workforce, as well as focusing on strategies to make the health systems efficient and equitable are important key recommendations. These lessons become even more important in the context of health systems in the post-COVID-19 era and have a significant bearing on overall sustainable development.

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